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| <b>PRE-APPEAL BRIEF REQUEST FOR REVIEW</b>  |  | Docket Number (Optional)<br><b>4536-124</b> |  |
| I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]<br><br>on _____<br><br>Signature _____<br><br>Typed or printed name _____   | Application Number<br><b>10/823,845</b>        | Filed<br><b>April 14, 2004</b>              |  |
|   | First Named Inventor<br><b>David Hsing LIN</b> |   |  |
|   | Art Unit<br><b>2166</b>                        | Examiner<br><b>Naveet Ahluwalia</b>         |  |
| <p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s).<br/>Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <p><input type="checkbox"/> applicant/inventor. _____<br/>Signature<br/><b>Randy A. Noranbrock</b><br/>Typed or printed name</p> <p><input type="checkbox"/> assignee of record of the entire interest.<br/>See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.<br/>(Form PTO/SB/96)</p> <p><input checked="" type="checkbox"/> attorney or agent of record. <b>42,940</b> _____<br/>Registration number<br/><b>703-684-1111</b><br/>Telephone number</p> <p><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. _____<br/>Registration number if acting under 37 CFR 1.34<br/><b>June 28, 2007</b><br/>Date</p> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.</p> <p><input checked="" type="checkbox"/> Total of <u>1</u> forms are submitted</p> |  |   |  |

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of :  
David Hsing Lin : Confirmation No. 5529  
U.S. Patent Application No. 10/823,845 : Group Art Unit: 2166  
Filed: April 14, 2004 : Examiner: Navneet K. Ahluwalia  
For: METHOD AND APPARATUS FOR MULTI-PROCESS ACCESS TO A LINKED-LIST

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Responsive to the Final Official Action mailed May 15, 2007, the following reasons are submitted in conjunction with the pre-appeal brief conference request:

**Claims 1-22**

The Patent and Trademark Office (PTO) asserts that claims 1-22 are anticipated under 35 USC 102(e) by Gao et al. (US 6,898,650). Final Official Action (FOA) mailed May 15, 2007 at pages 2 and 3. There are at least two reasons claim 1 is patentable over Gao.

First, Gao fails to disclose or suggest “marking the subsequent element in the linked-list as in-use after encountering a breakpoint” as recited in claim 1. The PTO asserts that Gao, at column 3, lines 39-50, discloses the claimed limitation. This is incorrect.

The PTO-identified portion of Gao, reproduced herein for ease of reference, states:

FIG. 3 shows a container for a queue according to the preferred embodiment of the invention implemented on the computer system of FIG. 1. In FIG. 3, container 305 includes in-use and data valid flags 310 and 315, data field 320, and next pointer 325. In-use flag 310 indicates whether the container is being used at the current time (in other words, whether or not the container is available for use). In-use flag 310 is the preferred embodiment for a container lock, which allows only

one client to use a container at a time. Data valid flag 315 indicates whether a container holds valid data. But data valid flag 315 is not absolutely required, and can be part of data field 320.

The above portion of Gao appears to describe the use of in-use flag 310 and data valid flag 315 to indicate whether a container is being used and whether a container holds valid data, respectively. However, this does not meet the claimed limitation of the present claimed subject matter. The above portion of Gao fails to disclose “encountering a breakpoint” and therefore also fails to disclose marking a subsequent element in a list as in-use after encountering a breakpoint. For at least this reason, withdrawal of the rejection is respectfully requested.

Further, according to Gao at column 4, lines 36-40, a client attempts to set in-use flag 310 using an atomic set and swap operation “to try to lock the container,” “so that no other client can use the container.” Thus, the in-use flag of Gao does not appear to be marked after encountering a breakpoint. For at least this reason, withdrawal of the rejection is respectfully requested.

Second, Gao fails to disclose or suggest “creating a recommencement reference to [a] subsequent element” as recited in claim 1. As described in the instant specification at page 6, paragraph 12, creation of a recommencement reference allows a first process to “unlock the linked-list (step 45), thereby allowing an opportunity for a second process to gain control over the linked-list.” After the first process regains control over the linked-list, the first process is able to “determine[] a subsequent element in the linked-list according to the recommencement reference that points to a subsequent element (step 55).” Instant specification at page 7, paragraph 13.

The PTO asserts that Gao, at column 2, lines 46-58, column 3, lines 9-20 and lines 51-59, and column 4, lines 36-49, discloses the claimed limitation. FOA at page 2, fourth full paragraph and page 3, third full paragraph. This is incorrect.

Column 2, lines 46-58 of Gao, reproduced herein for ease of reference, states:

FIG. 2 shows a queue head for a queue according to the preferred embodiment of the invention implemented on the computer system of FIG. 1. In FIG. 2, queue head 205 includes read/write lock 210 (sometimes also called a queue lock), counter 215, and next pointer 220. Read/write lock 210 indicates whether the queue is locked for reading or writing. When clients wish to access containers in

the queue, they lock the queue for reading. There can be as many simultaneous clients reading the queue as desired.

The above portion of Gao appears to describe the use of a queue head 205 which appears to be an object pointing to the beginning (or head) of the queue, e.g., queue 405 of FIG. 4. There appears to be no disclosure of the next pointer as a recommencement reference to a subsequent element in the linked-list as claimed.

Nor does there appear to be any disclosure of creating a recommencement reference to a subsequent element through the use of the next pointer. That is, the next pointer appears to be set to point to the head of the queue and not a subsequent element in the queue.

Column 3, lines 9-20 and 51-59 of Gao, reproduced herein for ease of reference, state:

Returning to FIG. 2, next pointer 220 points to one of the containers in the queue. Note that it does not matter which container in the queue next pointer 220 points to, so long as all containers are accessible. Thus, the organization of the queue is not relevant to the invention, and the invention is equally applicable to different queue implementations. For example, the queue can be structured as a singly linked list, a doubly linked list, a circular list, or an array. Further, the invention is applicable to priority queues (queues in which the containers are each assigned a priority, and containers with higher priorities are used before containers with lower priorities).

...

Returning to FIG. 3, data field 320 stores the data in the container. The type of data stored in the container is generally not limited, although queues designed to store specific types of data are possible. Similarly, the amount of data stored in the container is generally not limited. Finally next pointer 325 points to the next container in the queue (or, if the queue has an end and the current container is the last container in the queue, next pointer 325 is a null pointer).

The above portions of Gao appear to describe the use of next pointer 220 to point to the queue without describing the creation of the next pointer as a reference to a subsequent element. The second of the above portions, i.e., column 3, lines 51-59, appear to be directed to describing the use of the next pointer 325 of container 305 and not queue head 205. This relied-upon portion is inapplicable with respect to the next pointer 220 identified by the PTO.

Further, neither of next pointer 220 or 325 may be used as a recommencement reference as described according to the specification, i.e., after a first process regains control over the

linked-list from a second process, the first process is able to “determine[] a subsequent element in the linked-list according to the recommencement reference that points to a subsequent element (step 55).” Instant specification at page 7, paragraph 13.

Column 4, lines 36-49, reproduced herein for ease of reference and convenience, state as follows:

At step 510, the client locates a container in the queue. At step 515, attempts to lock the container, so that no other client can use the container. In the preferred embodiment, an atomic set and swap operation is used to try to lock the container by setting the in-use flag to 1. An atomic set and swap operation sets a field to the given value and returns the old value atomically (in one indivisible computer operation). Many modern computer systems (e.g., IBM mainframes) have such instructions, and most MP environments (e.g., Novell's Multiple Processor Kernel) include such functions. Generally, the atomic set and swap operation will return the value of the field being accessed to the caller; the value returned gives the caller an indication of whether the operation succeeded.

The PTO-identified portion of Gao appears to describe using an atomic set and swap operation to attempt to lock access to a container in a queue. There appears to be no disclosure of creation of a recommencement reference to a subsequent element in the linked-list as claimed.

Further, Gao fails to specify how the “client locates a container in the queue” and instead, based on the listing of Table 14 appears to describe traversal of the queue by following the next pointer 325 of each container 305 instead of use of queue head next pointer 220 as asserted by the PTO.

Based on at least the foregoing, claim 1 is patentable over Gao and the rejection is respectfully requested to be withdrawn. Claims 2-4 depend, either directly or indirectly, from claim 1, include further limitations, and are patentable over Gao for at least the reasons advanced above with respect to claim 1. The rejection of claims 2-4 should be withdrawn.

Claims 5, 7, 13, and 19 are patentable over Gao for at least reasons similar to those set forth above with respect to claim 1 and the rejection is respectfully requested to be withdrawn. Claims 6, 8-12, 14-18, and 20-22 depend, inter alia, from claims 5, 7, 13, and 19, respectively, and are patentable over Gao for at least reasons similar to those set forth above with respect to the claims from which they depend and the rejection is respectfully requested to be withdrawn.

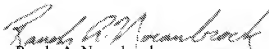
**Conclusion**

All objections and rejections having been addressed, it is respectfully submitted that the present application should be in condition for allowance and a Notice to that effect is earnestly solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 08-2025 and please credit any excess fees to such deposit account.

Respectfully submitted,

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